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10/799,871	03/12/2004	David A. Pintsov	11JN-123385	6131

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EXAMINER
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RASHID, DAVID

ART UNIT	PAPER NUMBER
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2624

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,871	<b>Applicant(s)</b> PINTSOV ET AL.	
	<b>Examiner</b> David P. Rashid	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

### *Amendments*

1. This office action is responsive to the claim and specification amendment received on 5/18/2007. Claims 1 – 22 remain pending.

### *Drawings*

2. The replacement drawings were received on 5/18/2007 and are acceptable. In response to applicant's drawing amendments and remarks, the previous drawing objections are withdrawn.

### *Claim Objections*

3. The following is a quotation of 37 CFR 1.75(a):

The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

4. **Claims 1 - 22** are objected to under 37 CFR 1.75(a), as failing to conform to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery.

(i) Claim 1, line 6 and claim 16, line 4 is unclear whether the "selected document" and "the document to be identified and read" is the template document, document image, or potential document in the database to be read. The Applicant Arguments/Remarks Made in an Amendment states "...a document/check template includes information about the unique layout of the document/check that allows the system to identify and read the document/check." The sentence "The template may then be used to identify the location on the document to look for

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information that is desired during processing.” hints that each document template includes information about a unique layout of a particular document in the series of known documents to allow that particular document to be identified and read.

To avoid confusion, it is suggested to reword claim 1 and 16 as “...each document template including information about a unique layout of a particular selected document to allow that particular document image to be identified and read;”.

(ii) Claim 10, line 5 has that same argument as Claim 1 and 6 replacing “document” with “check”.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1-22** are rejected under 35 U.S.C. 102(b) as being anticipated by Stolfo (US 5668897 A). **Claim 2-9, 11-15, and 17-22 rejections are repeated herein verbatim from the previous Office Action.**

Regarding **claims 1 and 9**, Stolfo discloses a method of automatically selecting document templates (“The present invention relates to the field of automated image processing...”, column 1, line 17.), comprising the steps of:

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presenting a document image from an account (“At this point, according to the present invention, the check is scanned into the system for pattern recognition and electronic processing 58.”, column 17, line 56 in combination with FIG. 4 wherein the check is a document);

matching the document image against a series of known document templates from the account (FIG. 1, elements 3,5; Col. 15, lines 5 - 8), each document template including information about a unique layout of a selected document image to allow the document image to be identified and read (“...each record has unique elements...that distinguishes one record from another.” in Col. 15, lines 17 – 23; Col. 15, lines 46 - 51); and

producing confidence scores corresponding to the degree of similarity of the document image compared to each document template (“A match will be considered so long as the pixel range between the scanned image and the stored image is within some threshold  $\lambda$ .”, column 14, line 59.).

For clarification, Stolfo teaches two possibilities regarding high and low similarity thresholds for confidence score X (Case 1 will be assumed for examination purposes, though both are equally applicable):

**Case 1** (the high and low similarity threshold =  $\lambda$ )

$0 \leq X < \lambda$	“above $\lambda$ ”	(steps 112 or 108)
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$X > \lambda$	“below $\lambda$ ”	(step 118)
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**Case 2** (high similarity threshold = 0, low similarity threshold =  $\lambda$ )

$X = 0 = \text{MATCH}$	“above $\lambda$ ”	(step 108)
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$X > \lambda$	“below $\lambda$ ”	(step 118)
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Regarding **claims 2 and 3**, Stolfo discloses the method of claim 1, further comprising the step of matching the confidence scores with a predetermined high similarity threshold (Referring

to FIG. 6, the check image undergoes the step of searching a database (106) in search for either a complete match (108), a match within tolerance (112), or a match of any combination of patterns (118). "The input image is deemed to be a match whenever the distance is less than a preestablished threshold ( $\lambda$ ).", column 3, line 28. It can be inferred that a high similarity threshold is when the calculated distance is less than (considered "above" when negating) a pre-established  $\lambda$  (step 108 or 112.).

Regarding **claim 4**, Stolfo discloses the method of claim 1, further comprising the step of matching the confidence score with a predetermined low similarity threshold (The high similarity threshold as disclosed in Stolfo can also constitute a low similarity threshold also if any calculated  $\lambda$  value is greater than (considered "below" when negating) a pre-established  $\lambda$  as discussed above (step 118).).

Regarding **claim 5**, Stolfo discloses the method of claim 4, further comprising the step of creating a new document template for the account corresponding to the document image if the confidence score is below the predetermined low similarity threshold (FIG. 6, reference numeral 124 shows that a background of the check image below the pre-established  $\lambda$  value is compressed. In addition, "It is another object of the present invention to provide variable-size or scaled check images retained on storage media, including decompression by utilizing codebook code to render full color and faithful reproductions of archived check images.", column 11, line 42, and thus it can be inferred that if the check image in question has been compressed into the memory for future decompression when exerting the algorithm, a new document template for the account has been produced.).

Regarding **claim 6**, Stolfo discloses the method of claim 4, further comprising the step of applying a partial layout comparison to the image and the closest matching template if the

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confidence score is above the low similarity threshold (Other than the background pattern template comparison as discussed above, FIG. 4 shows a signature comparison as well. Because of these two separate databases and comparisons, the background pattern template comparison (having FIG. 6 in more detail) can be considered a partial layout comparison of the check as a whole. It has already been discussed above that if the confidence score and the low similarity threshold is equivalent to the high similarity threshold (Case 1), being above the low similarity threshold is equivalent to the high similarity threshold range as already discussed in claim 3.).

Regarding **claim 7**, Stolfo discloses the method of claim 6, further comprising the step of providing results of the partial layout comparison including a list of image parts and a corresponding confidence score for each image part (Other than the background pattern template comparison as discussed above, FIG. 4 shows a signature comparison as well. “In one embodiment according to the present invention, the payor's signature on the check 50 is verified for authenticity by comparing it with a database of signatures 84 including a representation of the signature of the drawer. If the signature does not match a corresponding signature in the database 86, the bank operator needs to be informed for manual verification and the possibility of a possible fraudulent check 88.”, column 26, line 66. It is inherent that comparing a signature to signatures in a database requires some threshold or confidence score.).

Regarding **claim 8**, Stolfo discloses the method of claim 7, further comprising the step of creating one or more exclusion zones corresponding to image parts that exhibit a low confidence score (The matching of the check background and signature to the databases within a pre-established threshold will inherently create “exclusion zones” as shown in FIG. 4. For example, take element 86 to determine whether a valid signature match is present or not. The exclusion zone in this case would be element 88, wherein the method informs the operator of a possible

fraudulent check if the signature does not match within a pre-established threshold. It has been interpreted by the examiner that an exclusion zone is any action taken if the image part of the check does not match within a pre-established threshold.).

Regarding **claim 9**, claim 9 recites identical features as in claim 1. Thus, arguments equivalent to that presented above for claim 1 are equally applicable to claim 9.

Regarding **claim 10**, claim 10 recites identical features as in claims 1, 2, 4, and 9. Thus, arguments equivalent to that presented above for claims 1, 2, 4 and 9 are equally applicable to claim 10.

Regarding **claim 11**, claim 11 recites identical features as in claim 3. Thus, arguments equivalent to that presented above for claim 3 is equally applicable to claim 11.

Regarding **claim 12**, claim 12 recites identical features as in claim 5. Thus, arguments equivalent to that presented above for claim 5 is equally applicable to claim 12.

Regarding **claim 13**, claim 13 recites identical features as in claim 6. Thus, arguments equivalent to that presented above for claim 6 is equally applicable to claim 13.

Regarding **claim 14**, claim 14 recites identical features as in claim 7. Thus, arguments equivalent to that presented above for claim 7 is equally applicable to claim 14.

Regarding **claim 15**, claim 15 recites identical features as in claim 8. Thus, arguments equivalent to that presented above for claim 8 is equally applicable to claim 15.

Regarding **claims 16 and 22**, claims 16 and 22 recites identical features as in claims 1, 2, 4 and 9. Thus, arguments equivalent to that presented above for claims 1, 2, 4 and 9 are equally applicable to claims 16 and 22 in addition to performing the method using a computer program and machine readable instructions as disclosed: "Thus, the invention includes, as a feature, the creation and maintenance of a codebook library of scanned check information, in a suitable



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storage form, e.g. actual image or compressed image data of various resolutions, that can be used to regenerate the actual image data, through the use of an algorithm executed by a computer or a series of mathematical equations that can compare the features and relationships (e.g. geometric) between the codebook and the actual regenerated image.”, column 9, line 3.

Regarding **claim 17**, claim 17 recites identical features as in claim 3. Thus, arguments equivalent to that presented above for claim 3 is equally applicable to claim 17.

Regarding **claim 18**, claim 18 recites identical features as in claim 5. Thus, arguments equivalent to that presented above for claim 5 is equally applicable to claim 18.

Regarding **claim 19**, Stolfo discloses the computer program of claim 16, further comprising machine readable instructions for applying a partial layout comparison to the document image and the closest matching document template if the confidence score is above the low similarity threshold and below the high similarity threshold (FIG. 6 again shows the background portion of the check being compared to database templates (partial layout comparison) for both the low and high similarity threshold comparisons against the confidence score. Arguments equivalent to that presented above for claims 3 and 5 is equally applicable to claim 19 since the low and high similarity threshold comparisons are equivalent in Case 1.).

Regarding **claim 20**, claim 20 recites identical features as in claim 7. Thus, arguments equivalent to that presented above for claim 7 is equally applicable to claim 20.

Regarding **claim 21**, claim 21 recites identical features as in claim 8. Thus, arguments equivalent to that presented above for claim 8 is equally applicable to claim 21.

#### ***Response to Arguments***

7. Applicant's arguments filed on 5/18/2007 with respect to **claims 1, 10, and 16** have been respectfully and fully considered, and though found persuasive, an adjusted and more specific

anticipation by Stolfo has been established over the amended claims. Applicant argues that Stolfo does not include document/check templates as described in the current application and as recited in the amended independent claims 1, 10, and 16. The Action states that Stolfo discloses document templates, however the “templates” of Stolfo are not the same as the document templates in the present application because it instead teaches a list of background patterns or colors that can be subtracted from an image (allowing the information to be stored as a code to compress the image). Moreover, Stolfo fails to provide a document/check template including information about the unique layout of the document/check that allows the system to identify and read the document/check.

However, Stolfo does disclose “templates” that are the same as the document templates in the present application as cited in Col. 15, lines 5 – 8 and FIG. 1. Stolfo also cites that each document template includes information about a unique layout of a selected document image to allow the document image to be identified and read (“...each record has unique elements...that distinguishes one record from another.” in Col. 15, lines 17 – 23; Col. 15, lines 46 - 51).

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578.

The examiner can normally be reached on Monday – Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David P Rashid

/ **Brian P. Werner** Examiner

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**Supervisory Patent Examiner****Art Unit 2624**